UAB School of Engineering
February 27, 2016
UAB Hill Student Center
Welcome to the

UAB SCHOOL OF ENGINEERING

45th Anniversary Celebration Dinner

Celebrating 45 Engineers Making a Difference

Welcome

Scholarship Announcement

Recognition: Future Engineer Destined to Make a Difference

45 Engineers Making a Difference Video

Presentation of Awards
Zaineb Ahmad

Zaineb Ahmad started her career with a passion for STEM and the will to positively impact the world around her. Though originally on a path towards medicine, she found her true calling in engineering, exploring the worlds of biomedical, mechanical, and finally, software.

Currently the Business Analyst for MEDHOST’s perioperative software applications, Zaineb works as a front-end and technical expert of the product, manages product maintenance, and acts as a point of contact between the development team and customer-facing internal departments. She has a bachelor of science in general science and a bachelor of science in biomedical engineering, from Birmingham-Southern College and Washington University in St. Louis, respectively, as well as a master of science in mechanical engineering, with a focus in biomechanics, from UAB.

Zaineb currently resides in Dallas, Texas, where she remains dedicated to engineering excellence. She is actively involved in the Society of Women Engineers (SWE) and is engaged in the community. She often participates as a panelist and/or mentor, advocating engineering as a profession to young girls and women, explaining the diversity within engineering fields, and providing a positive role model. She tutors and mentors numerous female high school and college students interested in or working towards STEM degrees. As a professional member of SWE, she serves on several committees at the section, region, and society levels, and currently serves as the Dallas SWE Vice President of Membership. She actively participates in Design Your World, a STEM conference for girls and the signature event of Dallas SWE, where she has designed and led a biomedical engineering bone-fracture activity, coordinated a mechanical engineering activity involving racing rollercoasters, organized the engineering fashion show, and participated in the parent/educator panels.
Kenneth Banasiewicz

Kenneth Banasiewicz is the manager of the mechanical engineering section at the EITD group in the School of Engineering at UAB. He has been employed at UAB in various projects and responsibilities for the last 19 years. He is responsible for leading a team of engineers in the development of state-of-the-art devices for NASA’s International Space Station (ISS). The primary product developed is a line of incubators capable of temperature control from -160°C to +50°C providing science payload delivery to and from ISS. Kenneth was lead engineer for the development of ground support flooring system used in the ISS modules for ground processing while employed at Teledyne Brown Engineering.

He finds rewarding the challenges of designing products for the unique requirements for space flight. He enjoys mentoring young engineering professionals at EITD on developing NASA related hardware platforms and engineering practices.

Kenneth is a member of Tau Beta Pi, Phi Kappa Phi, and National Society of Professional Engineers. He lives in Helena, Alabama, with his wife Marsha. They are the proud parents of three adult daughters. Kenneth interests are reading mystery novels, traveling the blue highways and music. He is attempting to learn the guitar.
Neel Varshney, M.D., is a principal on the Healthcare Industry Team at KKR, focusing on buyout and growth investments. Prior to KKR, he was a vice president at Linden Capital Partners, a $1.3B healthcare focused PE fund, and an Engagement Manager at McKinsey & Company, where he worked with private equity, hedge funds, and strategics on buyouts, M&A, and growth. He also held a BD role at Medtronic. Neel earned a B.S., Electrical Engineering with Honors from UAB and an M.D. with Honors from Harvard Medical School/MIT (Soros Fellow). He completed his internal medicine internship at Massachusetts General Hospital and was a Rhodes Scholar at University of Oxford.

Kristie Barton is the Transmission Maintenance General Manager for Alabama Power Company, a subsidiary of Southern Company. In this position, she is responsible for the safety, operation, maintenance and storm restoration of the transmission system for the state of Alabama. She chairs the Southern Company Transmission Physical Security Initiative and serves as the Alabama Power Transmission Storm Center Director.

Kristie began her career with Southern Company in 1994 as a student engineer and has successfully held various positions of increasing responsibility in the areas of substation construction, transmission line maintenance, transmission line design, and distribution services. She has also served as Storm Director, overseeing disaster preparedness and recovery plan implementation during Hurricane Katrina in 2005 and April’s Fury in 2011.

Kristie is a graduate of UAB, where she received a bachelor’s degree in civil and environmental engineering. In 2010 she completed the Executive Master of Business Administration Program at Auburn University.

Kristie has been a member of various civic organizations and currently serves as a member of the UAB Civil Engineering Alumni Board of Directors. She also served as treasurer and executive board member for the Boys and Girls Clubs of the Gulf Coast, Alumni Chairperson and board member of Leadership Gulf Coast, and was a board member of the Gulfport, Mississippi Chamber of Commerce.

Kristie is a native of Birmingham, Alabama. She and her husband, Michael, have one daughter, Ashley.
Dr. Mark Simpson Berry, P.E., is vice president of Environmental Affairs for Georgia Power. Named to the position in August 2015, he directs the company’s environmental compliance and stewardship programs to meet or surpass all environmental laws and regulations.

Berry returned to Southern Company after serving as director in the generation sector at the Electric Power Research Institute (EPRI), where he managed research and development efforts in renewables, water management, advanced fossil generation, and carbon capture and storage.

Prior to EPRI, Berry served as director of Energy and Environment at Southern Research Institute. Berry worked 17 years in various capacities of increasing responsibility at Southern Company. He served as manager of environmental assessment for the company’s research and environmental affairs organization, where he managed the company’s regulatory response to federal rulemaking activity and the environmental science research program. He also served as director of Research and Technology Management, managing a portfolio of research related to emission controls, energy efficiency, renewables, power delivery, central station generation, and carbon capture utilization and storage.

Prior to joining Southern Company, Berry attained the commissioned rank of lieutenant commander in the United States Navy as a surface warfare officer. Berry holds a bachelor’s degree in mathematics from Alabama A&M University, a bachelor’s and master’s degree in mechanical engineering, and a Ph.D. in interdisciplinary engineering from UAB. He also earned a master’s degree in public and private management from Birmingham-Southern College and is a registered professional engineer.

Berry is a board member of the Georgia Conservancy, president of the International Society of Electrostatic Precipitation and a former board member of the Youth Motivation Task Force at Alabama A&M University. He holds four patents regarding technical approaches to control emissions from coal-fired power plants.

Jason Stewart grew up just south of Birmingham, and attended UAB from 1990-94. His first job took him to Elmco Engineering Indianapolis, Indiana, a powder metal press rebuilder. In 1997 he took another position at Rotary Lift in Madison, Indiana, a manufacturer of vehicle lifts. In 2008 he moved to his current position at CDS-John Blue Company in Huntsville, Alabama, a manufacturer of agricultural products. He married his wife Michelle while at UAB, and they have six children.

While in Madison Indiana, he was introduced to the Poor Children’s Assistance Project through contacts at our church and became a contributor. This is a Christian based organization started by a Haitian pastor who opened 3 orphanages in remote mountain villages centered around Camatin Haiti. The 2010 earthquake destroyed two of the orphanages, which led to the consolidation of all children at the large Camatin location.

Jason was given the opportunity to travel to the orphanage in July 2015 on a joint medical and construction team from Indiana, and my eyes were opened to how precious of a commodity water is to the people in this area. Wells are not easily dug in their mountainous area, and usually the females are responsible for walking long distances into the valleys to retrieve water (which is usually not clean and leads to sickness). That trip (and previous construction projects) mainly concentrated on orphanage and home re-roofing for the local villagers, but this revelation led Jason to push for the acquisition of materials to collect rain water from their roofs on future trips.

After conducting some research and planning about construction of water collection systems in Haiti, the mission team purchased enough materials to do two houses. Jason travelled to Camatin again this January and was able to help install the units. He plans to visit Camatin at least once per year and provide technical support to the other teams that travel there throughout the year.
Heather Smith Sawyer is the BWSC Program Manager of Hydrologic & Hydraulic services for the Tennessee Valley Authority. Her experience also includes leadership roles in water resources-related projects for Sequoyah, Watts Bar, Browns Ferry, and Bellefonte Nuclear Plants. She is a registered professional engineer in the State of Tennessee and the Commonwealth of Virginia.

Smith Sawyer earned a bachelor of science in civil engineering from UAB in 2003, then a Master of Science in Civil Engineering from Georgia Institute of Technology. She is currently a Doctor of Philosophy candidate at Vanderbilt University with funding from the Department of Energy’s Energy Efficiency and Renewable Energy Program through Oak Ridge National Laboratory. Smith Sawyer has become an active member of the Nuclear Energy Institute Fukushima Flooding Task Force, American Nuclear Society, and Society of American Military Engineers. She currently serves as the Chair of the UAB Civil, Construction, and Environmental Engineering Alumni Leadership Council.

In the past 40+ years, Uday Bhate has founded several successful engineering and environmental companies including Bhate Geosciences Corporation in Birmingham, Alabama. He grew up in India and finished first in his class at the University of Bombay.

Moving to Atlanta in December 1969, he earned a master of science degree at Georgia Tech before beginning work on the Savannah River improvement project for the US Army Corps in January 1971. His first major Alabama assignment was in 1972 conducting a geotechnical assessment for a nuclear power plant site. He moved to Birmingham in 1973. While working full time, he completed his MBA degree at UAB in 1977.

UAB was one of Bhate’s earliest clients starting in 1973. He has worked on a majority of the new high rise buildings in Downtown Birmingham and many buildings on UAB Campus, other major hospitals in the area, industrial facilities such as Honda Motors and major shopping malls.

Bhate was inducted in the AGC Alabama Construction Hall of Fame in 2015. Other honors include Georgia Institute of Technology Outstanding Alumni Award, UAB School of Business Outstanding Alumni award, Chairman’s Award – Alabama Concrete Industries Association, Birmingham Chamber Business Person of the Year and Jesse Lewis Community Service Award. He also serves on the UAB School of Civil, Environmental and Construction Engineering Advisory Board and UAB Leadership Council. He enjoys golf, travel and writing. He is married (Peggy) with one son (Josh) and one granddaughter (Harper).
André Bittas is the Director of Planning, Engineering & Permits for the City of Birmingham, Alabama. During his nine-year tenure, he has managed and directed more than $300 million of capital improvements projects and he oversaw the development of the City of Birmingham’s Citywide Comprehensive Plan.

Bittas has more than 18 years’ experience in engineering, planning and transportation planning that create community supported, context sensitive design solutions for redeveloping urban places. He also leads a multidisciplinary planning and engineering staff that is focused on developing integrated sustainable solutions particularly in areas such as transport planning and green infrastructure.

Bittas holds a bachelor’s degree in civil engineering and a master of business administration (MBA) from UAB.

Gary Savage is a 1982 engineering graduate of UAB and formerly the President of US Operations at BL Harbert International. Gary retired in December of 2015 after 29 years in the industry.

Gary began in the industry as an assistant project manager working his way up to be President of the U.S. Group for BL Harbert International.

During Gary’s tenure as President, BL Harbert opened six new offices across the Southeast U.S. while completing numerous notable projects throughout this region. A few of these projects are the Mercedes-Benz Logistics Center; the Command and Control Army Headquarters in Huntsville; a NASA Operation Center; GE Production Facilities; the Ole Miss Basketball Arena and the South Donahue Athletic Dorm at Auburn. In 2014, BL Harbert was awarded the Associated Builders and Contractors (ABC) Top National Safety Award, which was earned due to BL Harbert’s exemplary safety practices and records.

The financial success of BL Harbert is currently the strongest in the company’s history. Under Gary’s leadership, BL Harbert constructed approximately $1.2 Billion world-class facilities while transitioning the company from primarily a government contractor to a company that services all sectors of our industry- government, commercial, industrial and healthcare.

Beyond the numbers, perhaps Gary’s most notable achievement as President was his development of the Corporate Community Service Initiative. Each project team is challenged with performing a yearly community service project. Gary also created a scholarship program for the company’s interns and students in the co-operative program. BL Harbert has named the program the Gary W. Savage Scholarship in his honor. These efforts reaffirm his belief and commitment to making a difference in the community.

During retirement, Gary will continue to serve on the Governor's Alabama Workforce Development Council and as the Vice President of the Alabama Chapter of the Associated General Contractors (AGC).
Doug Rigney is a UAB Blazer to the core of his being. He completed all four of his degrees at UAB: B.S. in engineering 1980; B.S. in materials engineering 1985; masters in biomedical 1985 and Ph.D. in biomedical 1989. He began his academic career at UAB as assistant professor of material science and engineering (1989) and rose to rank of professor of biomedical engineering in 2005.

Dr. Rigney served in a number of campus leadership roles including associate dean of the UAB School of Engineering and later as Special Assistant to the Provost to guide the implementation of a new student record and information system (2005-2006).

His dedication to the mentorship of UAB undergraduate and graduate students was widely recognized and led to his serving as vice president for Student Affairs from 2006 to 2009 where he led student affairs through a renewal of its strategic plan and oversaw the opening of UAB’s first new student housing unit (Blazer Hall) in more than three decades.

He was appointed UAB’s Vice President for Information Technology and Chief Information Officer where he was responsible for numerous infrastructural advances in UAB’s technology systems and he developed UABIT’s first strategic technology plan.

Dr. Rigney holds membership in a number of professional organizations, including leadership roles in UAB National Alumni Society as a Board member and President, Chair of the UAB Faculty and Staff Benevolent Fund Council, President of UAB School of Engineering Alumni Association and Chairman of the Board of the Alabama Super Computer Authority Board of Trustees. He has a strong record of academic publications on the topic of physical properties of biomaterials used for orthopaedic and dental implants and mentored numerous master’s and PhD engineering students during his tenure at UAB.

Donny Burke has more than ten years of experience in the bioengineering field, during which he has made extensive contributions to consumer products safety. He is an assistant professor in the Department of Mechanical Engineering at UAB, and he teaches in the master of engineering program in Advanced Safety and Engineering Management (ASEM). He is also the associate director of ASEM. He spent more than eight years as a senior research engineer and project manager for the biomedical engineering firm, BioEchoes, which specializes in providing customized solutions to government, corporate, and legal organizations in system safety, product design and development, injury prevention and serious mishap analysis, and ethical leadership training.

Donny has been published in numerous scientific journals and conference proceedings, has delivered technical presentations around the world, and has patented devices on motor vehicle restraint design. He is currently an active member of the American Society of Safety Engineers, the Biomedical Engineering Society, the American Society of Mechanical Engineers, and the Society of Automotive Engineers. He was the founding president of the ASSE student section at UAB and currently serves as the section’s faculty advisor. He is also chair-elect of the ASSE Foundation Next Generation Board, a national board of young safety professionals who increase awareness of the Foundation’s purpose, encourage participation in the Foundation’s programs, generate funding, and provide resources for scholarship, applied research, academic accreditation, and related academic initiatives in order to advance the safety, health, and environmental profession.

Donny holds a dual B.S. degree from UAB - Biology with honors and Biomedical Engineering, and graduated with his Ph.D. in Interdisciplinary Engineering in May 2013.
Shunna Cannon has been employed by Southern Company for eight years in the Transmission Line Design workgroup, where her experience has allowed her to design transmission line infrastructure for a variety of projects throughout the Alabama Power service territory. She completed the Engineer in Training Matrix over the course of her employment and earned her Alabama professional engineering license in 2010. Prior to employment at Southern Company, Shunna was employed by BE&K Engineering Company in Birmingham where she worked as a structural engineer.

In 1996, Shunna graduated from the Alabama School of Fine Arts with a concentration in Visual Arts. She completed studies towards a B.S. in mathematics (cum laude), B.S. in civil engineering (magna cum laude), and an M.S. in civil engineering from UAB. As a UAB student, she worked as a graduate assistant with Dr. Fouad H. Fouad and as a summer engineering intern with the UAB Department of Project Management Services. Through the guidance of Dr. Louis Dale, she was also a student with the Louis Stokes Alliance for Minority Participation, in which she was awarded a scholarship.

Shunna currently serves as 2015-16 president of the Engineering Council of Birmingham (ECOB). She is a recent member of the National Society of Black Engineers (NSBE)-Birmingham. She is also a long time member of the Birmingham section of the Society of Women Engineers (SWE), which nominated her to successfully receive the 2009 ECOB ‘Young Engineer of the Year’ award. She also volunteers with the annual Alabama Power iCan Girls Engineering Conference, as well as with outreach activities with Girl Scouts and Girls, Inc.

Shunna enjoys gardening, barre/pilates/water aerobics, traveling, reading, and, most of all, watching her 13 year old son, Tyler, play basketball. She currently lives in McCalla.

Joo L. Ong received his B.S. degree from the University of Iowa in 1987 and his M.S. and Ph.D. degrees from UAB in 1990 and 1994, respectively. He served as the chair for the Department of Biomedical Engineering at the University of Texas at San Antonio from 2006 to 2015 and is currently the USAA Distinguished Professor of Biomedical Engineering and the Associate Dean of Administration for the College of Engineering at the University of Texas at San Antonio.

His primary research interests focus on the modifications of implant surfaces as well as the regeneration of functional bone tissues for large critical-sized defects. Past and current collaborations include scientists from the US Army - Institute of Surgical Research, Carnegie Mellon University, University of Texas Health Science Center at San Antonio, Southwest Research Institute, Kyoto University, Chonnam National University in South Korea, as well as researchers from biomedical industries. These collaborations have resulted in more than $39 million of research funding by numerous biomedical industries, private foundations, and federal agencies.

Dr. Ong has authored/co-authored over 130 articles in refereed journals and over 200 conference abstracts. He has given invited and keynote lectures at national and international meetings, served as a reviewer for several biomedical engineering related journals and as a grant reviewer for the NIH, NSF, DoD, European and Canadian funding agencies as well as state-based agencies. Dr. Ong also served on numerous committees, including being the Program Chair for the 2014 Society for Biomaterials Annual Meeting, a member of the Ethics Committee in the Biomedical Engineering Society, as well as being the Past President of the Implantology Research Group within the International Association for Dental Research. Dr. Ong is also one of the Associate Editors for the Journal of Biomedical Materials Research, Part B.
Katie Culpepper Mowry completed her undergraduate degree in biomedical engineering summa cum laude from Mississippi State University in 2008. She then moved to Birmingham and completed her master of science and doctorate of philosophy degrees at UAB in 2011 and 2013, respectively. While at UAB, in the lab of Susan Bellis, her research projects focused on coupling regenerative molecules to hydroxyapatite-containing biomaterials to enhance bone healing. This project encouraged collaboration with many groups and fostered her desire to work as part of a team. After graduation Katie began her career as a Senior Research Engineer with NuTech Medical. At NuTech, Katie has focused on building a laboratory and fostering collaborations with CROs and Universities to help progress the research interest at NuTech.

In 2014, Katie transitioned into working on both the laboratory and Clinical sides of research. This transition was an exciting new opportunity to have a closer look and measure how NuTech's product offering can really help patients. In 2015, Katie was promoted to the Director of Research and Development position. In this position, she works with management on strategic directions for the company and manages the Research team and the Clinical team. Katie is very enthusiastic about NuTech Medical, their products and the scientific story behind them.

Katie met her husband, Jeremy Mowry, while in graduate school at UAB. Jeremy also attended Mississippi State University and is a mechanical engineer at ACIPCO. They reside in the Oak Mountain area and have been married for 3 years.

Katie Mowry

Nancy Fouad Carey is a partner at the Burr & Forman Law Firm in Birmingham. She practices in the firm’s Construction and Corporate Practice Groups, representing clients in the construction, manufacturing, supply, and distribution industries. Nancy has extensive experience in advising clients in these industries on a wide range of construction and commercial contracts and assists her clients in the formation and negotiation of such contracts. Nancy also assists her clients with all aspects of contract and construction related claims and disputes, representing clients in mediation, arbitration, and litigation.

Prior to law school, Nancy received her master of science in civil engineering and her certificate in construction Engineering Management, as well as her B.S., cum laude with University Honors, in Civil Engineering, from UAB.

Nancy enjoys being active with her alma mater and currently serves on the Advisory Board for the UAB School of Engineering, as Vice President on the UAB National Alumni Association Board, and as President of the School of Engineering Alumni Association. In 2009, Nancy received the UAB National Alumni Society's Outstanding Young Alumnus Award.

Nancy has published several papers in the area of construction law and key construction issues facing owners, contractors and subcontractors.

Nancy Fouad Carey
Dr. Shirley Clark received her B.S. in chemical engineering from Washington University in 1987. From the UAB School of Engineering, she received her M.S. in civil engineering in 1996 and her Ph.D. in environmental engineering in 2000. After graduating from UAB, she worked as a post-doctoral research engineer for the U.S. Environmental Protection Agency for one year before returning to UAB to teach in the Department of Civil, Construction and Environmental Engineering for two years. In 2003, she accepted a position at Penn State Harrisburg and was promoted to associate professor in 2009. Currently, she directs the two graduate environmental programs, Environmental Engineering and Environmental Pollution Control, at Penn State Harrisburg. In 2015, she received the Penn State Harrisburg Excellence in Advising Award, reflecting her commitment to her students and her belief that the university is a place of service for our students.

Dr. Clark’s research focus is in the area of stormwater runoff treatment, which builds on her master’s and dissertation work she started at UAB. She has investigated the impacts of roofing materials choices on stormwater runoff quality. Her primary research has been in the area of filtration to treat both commercial and industrial runoff. She and her students have published extensively on the work performed in her research lab. She has been an invited speaker at several national meetings. Professionally, she is an active member of the Environmental and Water Resources Institute of the American Society of Civil Engineers. She currently chairs the Urban Water Resources Research Council of EWRI.

She is grateful to Ruth Hocker who nominated her for this award, and to the many other students, colleagues and friends who have supported her throughout the years.

Dr. Fred Molz is Vice President of Research and Development at BioHorizons, Inc. He has 16 years experience in the development and commercialization of Dental and Orthopaedic devices and is an inventor on over 40 issued US patents. Dr. Molz received his bachelor of science (1992) in mechanical engineering from Auburn University and his master of science (1995) in biomedical engineering and doctor of philosophy (1999) in biomedical engineering from UAB.

Dr. Molz is an active board member on the UAB Department of Biomedical Engineering External Advisory Board and Undergraduate Science and Technology Honors Program Leadership Council.

Dr. Molz is an avid cyclist, sailor and enjoys spending time outdoors with Laura (his wife) and their two children, Sarah and Tiel.
Ricky Miskelley

After graduating from UAB in 1986 with a B.S. in civil engineering, Ricky was hired by Sherman Industries as a project engineer. In 1994 Ricky graduated from the EMBA program at the University of Alabama while still working at Sherman. In 2000, Ricky became an owner of a local business named Mail Enterprises. Currently, Ricky is an owner of six different businesses in the fundraising, marketing, real estate, financing and transactional billing industries with offices located in Birmingham, Los Angeles, Lake Charles and Nashville.

Ricky is a past President of the UAB National Alumni Society and has served on various boards in the Birmingham area.

Ricky and the former Melissa Hannah were married in 1997 and now have two boys, Luke (16) and Brock (14). Our family is a member of Brookwood Baptist Church in Mountain Brook.

J. Sam Davis, Jr.

J. Sam Davis, Jr., is president of MW/Davis Dumas & Associates, Inc., a leading consulting mechanical engineering firm in Birmingham, Alabama, that specializes in design of HVAC, plumbing and fire protection systems as well as systems energy analysis. Mr. Davis has served as president of MW/DDA for 14 years, and prior to this he served as vice-president/principal of Miller & Weaver, Inc. (predecessor of MW/DDA), a company he was with for over 21 years. Mr. Davis has been honored to be appointed by Governor Bob Riley to serve on the Alabama Board of Heating and Air Conditioning and Refrigeration Contractors, a position he held until July 2015. In 2012, he was appointed by Governor Robert Bentley to the Alabama Energy and Residential Board until 2017.

Mr. Davis earned his bachelor of science in mechanical engineering from UAB in 1978. He is currently licensed to practice engineering in 23 states, Puerto Rico, and the U.S. Virgin Islands.

Mr. Davis has served as the Principal-in-Charge for more than 200 projects a year for the past 16 years, totaling approximately $25,000,000 – $30,000,000 per year of installed mechanical systems. Some of the types of facilities he has designed include: hospitals, telecommunication buildings, data centers, missile production facilities, retail centers, government facilities (federal, state, county and local), religious, educational (secondary and primary), private office, hotel/convention centers and many other commercial properties.

Mr. Davis is a life-long resident of the Birmingham area, having grown up in Helena and currently residing in Pelham with his wife of 42 years, Patti. He is the oldest son of James S. Davis, Sr. and Annie Belle Davis and has two brothers and a sister.

Mr. Davis has two sons, Jami and Joe, and two grandchildren, Carter and Bentley.
Jim Dobbs was born and raised in Birmingham where he attended Shades Valley High School. He received his B.S. and M.S. from UAB in materials engineering in 1985 and 1991, respectively. He was a member of the UAB varsity soccer team, and was a volunteer coach for several youth organizations in Birmingham.

Dr. Dobbs worked at GE Aircraft Engines in Cincinnati, Ohio, as well as at GE’s Corporate Research and Development Center in Niskayuna, NY. At GEAE Dr. Dobbs worked on a variety of projects that were focused on improving jet engines. At CR&D Dr. Dobbs supported all of the GE businesses, including Locomotives, Medical, Lighting, Power Generation and Power Distribution and Controls. He completed his Ph.D. in materials science from the University of Florida in 1997.

Dr. Dobbs left GE in 1997 to become a partner at Benedict Engineering Company in Tallahassee, Florida. At BEC, he was involved in accident reconstruction and product failures, as well as the development of a research group. He also taught both undergraduate and graduate courses in Industrial Engineering at Florida State University.

In May of 2015, Dr. Dobbs joined the Boeing Company in Huntsville Alabama. He serves as the technical lead for the Metals and Ceramic group supporting both commercial and defense products and is currently working on developing titanium and aluminum alloys for airframe use.

Dr. Dobbs has authored or co-authored more than 10 publications and given many presentations at both local and national technical meetings. He holds more than 20 patents on a variety of topics and is a member of TMS, AWS, SAE, and ASTM.

He continues to volunteer his time coaching youth soccer, and enjoys assisting with Habitat for Humanity and other community activities. He is a licensed pilot and a licensed Professional Engineer. He has two incredible children and a wonderful wife of 28 years.

Shelia Montgomery Mills resides with husband, Steve Mills, in a loft in downtown Birmingham and has two stepsons and one granddaughter. Shelia’s career spans 24 years in the project management field, specializing in construction services, working with a local municipality, sitework firm, commercial and residential renovations firm, and eventually founding Civil Construction Solutions. Projects completed range from public, private, and institutional with involvement in key projects in the Birmingham area to include Whitmire Lofts, Revelator Coffee Shop and Roastery, Bamboo on 2nd, Uptown, UAB Softball Facility, McWane Center Streetscape, and WC Patton Park. Recently, the desire to find the best way to utilize her skills and positively impact the community brought Shelia into the role of Project Manager for the Birmingham Jefferson Convention Complex.

Shelia is dedicated to the advancement of engineering and committed to Birmingham. A member of Leadership Birmingham, Shelia also serves on the City of Birmingham’s Design Review Committee and on the advisory boards for both the UAB School of Engineering and Carver Engineering Academy.

Through her involvement with the American Society of Civil Engineers, Shelia served in leadership roles for the Birmingham Branch and is the President of the Alabama Section. She serves on national and local committees promoting outreach to pre-college students, investment in infrastructure, and sustainability. Annually, Shelia joins other engineers attending the “Fly-In” in Washington, DC, discussing state and local issues with elected officials. Recently, Shelia served as Chair of Alabama’s first Infrastructure Report Card, coordinating a group of engineers researching 11 categories of the state’s infrastructure. Numerous articles and television broadcasts were produced on the Report Card.
Joe Meads

Joe Meads is co-owner of Sain Associates, a Birmingham-based civil engineering company along with his twin brother, Jim. He has more than 30 years' experience as a civil engineer and is a registered Professional Engineer in multiple southeast states. Joe is Principal-In-Charge of many of Sain's municipal, government, and industrial/economic development projects. Sain was recently recognized by Southern Business & Development Magazine as one of the Top 3 Engineering Firms in the State of Alabama for economic development.

Sain currently serves as the City Engineer of Irondale where Joe and his wife, Rachel, have resided for 24 years. They have two children. Joe is a member of the Irondale Planning Commission and Irondale On The Move Advisory Committee. He is President-Elect of the Board of Directors for the Irondale Chamber, Vice Chair of Governmental Affairs and member of the Executive Committee for the Greater Shelby Chamber, board member of the North Central Fellowship of Christian Athletes, and Chair of Associates Advisory Council for Economic Development Association of Alabama. Joe is Past President of the Alabama Section American Society of Civil Engineers (ASCE) and he is the current Government Relations Chair for ASCE in Alabama.

Joe graduated locally at Tarrant High School and obtained a BSCE from UAB. He was awarded a UAB Alumnus Award for Distinguished Achievement and recognized as Excellence in Business Top 25 in 2014.

In his spare time, Joe enjoys spending time with family, fishing, and participating in church and mission activities. Joe is co-Chapel Representative of the Birmingham Barons Baseball Team and is an active deacon and Chair of the Missions Committee at McElwain Baptist Church. He has done mission work in inner-city Birmingham, multiple states, and led trips to Brazil the last 6 years.

Dr. Zoe Dwyer

Dr. Zoe Dwyer has spent nearly 30 years with the UAB School of Engineering, beginning when she enrolled as a freshman in 1986. She graduated cum laude with a bachelor of science in materials engineering in 1990 and followed that with an master of science in 1993 and a Ph.D. in 1994.

In the years since, she has served in a variety of roles within the school, including research engineer, post-doctoral fellow, assistant professor and director of outreach and retention. Since 2012, she has served as associate professor of materials science and engineering and associate dean for undergraduate programs.

Dr. Dwyer is the primary advisor for the majority of the school's incoming freshman. In addition, she has created and organized multiple student leadership organizations, including the Leadership Scholars Program, which enlists current students to assist with recruiting by leading tours and giving presentations to potential students. She also initiated the school’s first student mentoring program in 2014 and works closely with that group throughout the year to develop the program and coordinate events to increase undergraduate participation.

She has been married to David Dwyer since 1990. They have two daughters: Margaret, a freshman at Auburn, and Mary Ingalls, a freshman at Hoover High School. They also have a very handsome cat named Skittles.
Bob Edwards is a human and organizational performance consultant for The Hop Coach, an independent consulting firm he created in February 2015. Prior to that, he worked in a similar role for the Roper Corporation, helping organizations realize that human error is common and can even be expected in complex work environments. Through his work, Bob demonstrates how, when something bad happens, focus needs to shift from blaming those doing the work to a looking at the system. Bob draws on his life experience from the military, working in industry, outdoor adventure sports and raising a family of 12 kids to bring his presentations about human performance to life.

Bob is a leading expert on Human Performance Learning Teams and has led over 250 Learning Team sessions for safety and quality events and for operational upsets and challenging design issues. His approach is practical and easy to use. He brings real value to those who do the work and helps managers understand better the complexity and adaptive nature of work. He leads organizations to improve operational discipline through empowerment of employees and forward accountability. Bob is high energy and engaging and the audience will find that they have gone on a journey of learning and discovery during his presentation and at the same time acquired valuable tools for solving complex problems in the workplace. Bob has a BS degree in mechanical engineering from Tennessee Technological University and MS degree in Advanced Safety Engineering Management from UAB.

Jim Meads, P.E., is President/CEO of Sain Associates, a civil and traffic/transportation engineering and planning firm with offices in Birmingham, Alabama, Pulaski, Tennessee, and Mandeville, Louisiana. Jim holds a bachelor of science in civil engineering from UAB. Jim has more than 30 years of transportation engineering experience for a diverse range of projects throughout the eastern United States and is a registered Professional Engineer in 23 states. He has served as Principal-In-Charge of more than 500 Transportation Studies for major retail, mixed-use, and institutional development projects in more than 20 states.

Jim is active in several professional organizations including: The Institute of Transportation Engineers, American Council of Engineering Companies of Alabama, International Council of Shopping Centers, and Gulf Region Intelligent Transportation Society. He is the Transportation Committee Chair for ACEC Alabama and is on the Federal Highway Administration Everyday Counts Executive Committee for Alabama. Jim received the Alumnus Award for Distinguished Achievement by the UAB Civil & Environmental Engineering Advisory Board and the 2014 Top 25 Excellence in Business Award from UAB. He received the Top 40 Under 40 Award from the Birmingham Business Journal in 2002 and its Who’s Who In Construction in 2009. Jim was honored as Transportation Engineer of the Year by the Alabama Section ITE in 1996.

Jim is a co-editor of the Alabama Department of Transportation Access Management Manual and has been an instructor for training activities for ALDOT, Alabama Section ITE, and the Auburn Technology Transfer Program. Jim is passionate about strong leadership. He is a graduate of the Leadership Development Program at the Center for Creative Leadership in Greensboro, NC. He is a Men's Small Group Leader for Community Bible Studies at Church of the Highlands. Jim and his wife Julie live in Trussville and have an adult son and daughter-in-law.
Nathan Lovett was exposed to engineering as a member of the Explorer’s Post at U.S. Steel. At Phillips High School, he strived for excellence graduating with honors and being voted “most likely to succeed.” With the opportunities in engineering and the challenge of overcoming a demanding college major, it became apparent that he would pursue a career in engineering.

He received his B.S. in electrical engineering from Tennessee State University. At TSU, he was inducted into Eta Kappa Nu Electrical Engineering Honor Society. He was selected as a summer intern at Bell Telephone Laboratories, the pre-eminent R&D facility in the U.S. during that time.

Nathan began his career at Alabama Power Company where he acquired expertise in substation design and protective relaying, advancing thru various levels of responsibility. He pursued and received his M.S. in electrical engineering with a power systems emphasis and a concentration in Engineering Management from UAB. At UAB, he was inducted into Tau Beta Pi National Engineering Honor Society.

He left APCo to become Senior Executive Director of Facilities, Maintenance, and Operations for Birmingham City Schools where he directed all construction, maintenance, inventory, shipping/receiving, custodial support, and printing for the school district.

In his current position of Manager of Relay & Control Design at Georgia Transmission Corporation, Nathan oversees the electrical design of substations up thru the 500 kV voltage level. But his leadership extends above and beyond. He has served as chairman of the North American Transmission Forum System Protection Group, chairman of the Georgia ITS Relay Working Group, Southeast Region Vice-President of the TSU National Alumni Association, and President/founding member of NSBE Birmingham Professionals, to name just a few.

Clarence Fairer III graduated from UAB in March of 1985 with a bachelor of science in civil engineering. He also holds a bachelor of science in physical science from the University of Montevallo (December 1980) and a master of science in administration from Central Michigan University (December 1993).

Clarence Fairer III began his military career with the U.S. Air Force when he was commissioned as a Second Lieutenant on June 2, 1984. Mr. Fairer obtained his aeronautical wings from Mather AFB, CA after graduating on June 22, 1986.

After separating from active duty on December 31, 1992 with the rank of Captain, Mr. Fairer was hired by the Alabama Department of Environmental Management (ADEM) on February 22, 1994 and is currently a registered Professional Engineer with the Department's Air Division.

On April 9, 1996, he was sworn into the Alabama Air National Guard's 117th Air Refueling Wing and assigned to the 106th Air Refueling Squadron as an Instructor Navigator on the KC-135R Stratotanker, and afterward as the Chief of the Bioenvironmental Engineering Section in the Medical Group.

Lt Col Clarence Fairer III retired honorably on September 30, 2015, with over 31 dedicated years of service to the state of Alabama and the United States of America.
Glenn Fleisig grew up in a world with little overlap between sports and science. While completing his B.S. in mechanical engineering at MIT in 1984, Fleisig became involved with the new field of sports biomechanics. He then interned at the US Olympic Training Center, where he met a young surgeon named James Andrews. After completing his M.S. at Washington University, Fleisig moved to Birmingham where he and Andrews opened the American Sports Medicine Institute in 1987. While at ASMI, Fleisig earned his Ph.D. in biomedical engineering at UAB in 1994.

In our world today, safety and performance in sports are big issues for our personal fitness, our children, and our enjoyment as fans. One of the biggest concerns is the epidemic of “Tommy John” elbow injuries in baseball pitchers of all levels. Dr. Fleisig is the recognized leader in baseball pitching biomechanics, identifying mechanics for minimizing elbow and shoulder loads while maximizing ball velocity. He has tested the biomechanics of thousands of baseball pitchers and other athletes, from youth pitchers to athletes from most Major League Baseball organizations. He has also pioneered epidemiologic research correlating pitching volume to injuries, leading to pitch count regulations throughout amateur baseball. Dr. Fleisig has authored more than 150 scientific articles, book chapters, and books in sports medicine. He also takes great pride in training young researchers, as an adjunct professor at UAB and through the ASMI Student Researcher Program he created, in which he has mentored 200 students. Dr. Fleisig’s contributions go beyond academics, changing safety guidelines and rules through his work as an advisor for Major League Baseball, advisor for Little League Baseball, and chair of USA Baseball Medical & Safety Committee. He has also influenced behavior and practice in sports through hundreds of presentations throughout the U.S. and world, and countless interviews on television, radio, in print, and online.

Bolaji Kukoyi is the President of Dynamic Civil Solutions, a civil and transportation engineering firm headquartered in Birmingham, Alabama. Bolaji received multiple degrees from UAB: a bachelor of science in civil engineering, a bachelor of science in mathematics and a master of science in mathematics. As a licensed professional in multiple states, Bolaji possesses extensive experience on many civil site, roadway and transportation projects. He is adept in the development of civil and transportation construction plans having worked with sundry agencies and has successfully managed multi-million dollar programs with portfolios in excess of $70 million.

One client describes Bolaji as one who “has a dynamic and engaging personality and is a pleasure to work with because he does a first-class job.” Bolaji was the first dual recipient of the UAB Excellence in Business Top 25 and has also served as a panelist for the National Science Foundation Academic Research Infrastructure Program, a program designed to support 21st century research and research training infrastructure in our Nation’s academic institutions and non-profit research organizations.
Glenn Jones is the Lead Protection and Control Engineer for PowerGrid Engineering, Birmingham. He leads a team of engineers and technicians to provide complete engineering design solutions for Investor Owned Utilities throughout the Southeastern United States. Prior to his current position, he worked as a Supervising Engineer for Worley Parsons. In this role, he performed engineering studies and provided project management services for U.S. Steel Corporation. Before joining Worley Parsons, Mr. Jones spent 17 years in the primary metals industry with Nucor and U.S. Steel Corporation.

Beginning his career with U.S. Steel Corporation in 1993, he advanced through increasingly responsible management positions at the Fairfield Works facility.

Mr. Jones is a veteran who served in the United States Navy from 1983 to 1992. He is a graduate of the Naval Nuclear Power School.

Mr. Jones has been a member of IEEE for over 18 years and he was elevated to Senior Member in 2013. He is also a member of the National Society of Professional Engineers. He holds engineering licenses in the states of Alabama, Georgia, Florida, Arkansas, Mississippi, Louisiana, and North Carolina. He has supported numerous events to encourage young people to pursue careers in science and engineering, such as the Blazer’s BEST Robotics competition and S.T.E.A.M day at Lawson State community college.

A native of Birmingham Alabama, he completed his bachelor’s degree in electrical engineering at UAB in the spring of 1999.

Suphatha “Wendy” Gilbreath is a 2007 mechanical engineering graduate from UAB. She started her career working for a small toy company in Trussville, Alabama, on products such as the Bug Vacuum and the Counting Money Jar. She was a senior mechanical engineer for Mattel at the Fisher-Price office in New York City on brands such as Thomas & Friends, Mickey Mouse, and Minnie Mouse. She then moved to California to be an engineering project manager for Apple on the iPhone 5c, iPhone 6, and iPhone 6 Plus. She is currently vice president of Operations for a startup toy company, InRoad Toys, making a product called PlayTape. PlayTape is a toy that is revolutionizing the surface of vehicle and construction play, and, within only 2 years, was nominated for Preschool Toy of the Year by the Toy Industry Association in 2016. Wendy also serves as a UAB Mechanical Engineering Advisory Council member.

Wendy attributes a majority of her career successes to the opportunities that UAB provided: a chance to be the keynote speaker at the December 2007 UAB Commencement, internship opportunities with renowned companies such as Harley-Davidson Motor Company, the chance to float weightless through NASA’s Zero Gravity Flight Program, the ability to work with a small team to build a Mini Baja car from scratch, and most importantly, the insight through these activities to understand that there are not enough children (especially females) exposed to STEM careers.

It is from this insight that Wendy has built a career around toys for kids that are curious about the world and wondering “What do I want to be when I grow up?” Thanks to UAB, she understands the world of opportunity through engineering and hopes to pass this along to children for generations to come.
Grant Harwell

Grant Harwell is a Major in the United States Air Force, serving as a civil engineer officer stationed at Shaw Air Force Base (AFB) in South Carolina, where he is the operations flight commander at the 20th Civil Engineer Squadron. He leads 270 military and civilian engineer craftsmen in the day-to-day maintenance, repair, and operation of a 15,855-acre complex. He provides facility and base infrastructure support to Air Force and Army Headquarters units responsible for coordinating and conducting military operations throughout southwest Asia. At his previous assignment at Joint Base San Antonio-Lackland, Texas, he led a 13 person technical reach-back and engineering team supporting six forward deployed engineers in Afghanistan and Kuwait supporting a $2.2 billion contingency construction program. He developed, wrote, and managed numerous contracts valued at $322 million providing master planning, design, capital inventory assessment, construction inspection services, environmental, and engineering support to five customers at more than 30 locations worldwide. At his assignment at Joint Base Pearl Harbor-Hickam, Hawaii, he led multiple humanitarian assistance engineering events including a $48,000 project in Bangladesh and a $55,000 project in Sri Lanka repairing and modernizing dilapidated schools. He planned and executed over $1 million in additional engineering civic action program construction projects in the Philippines, Laos, Vietnam, and Nepal. Finally, he established a subject-matter expert exchange program with Asia-Pacific partner nation military engineers exchanging engineering tactics, techniques, and procedures as well as design standards and technical guidance. He has deployed four times to Afghanistan, the Philippines, Djibouti, and is currently deployed to an undisclosed location in southwest Asia leading a 24-person construction team executing nine projects valued at $3.52 million. He is a native of Birmingham, Alabama, graduated in 2005 with a bachelor of science in mechanical engineering, and earned his commission through the ROTC program.

Denise Jeffries joined Regions AD-Core, Enterprise Data Services on June 3, 2013. She and her team work closely with the internal Business Units to maximize opportunities for using data warehouse systems to improve the development and delivery of business information. Her team supports Region’s Hadoop based Operational Data Store and an Oracle Exadata based warehouse using prominent technologies around data such as ETL, data quality/reconciliation, analysis, reporting and dashboard delivery. A primary responsibility of her group is in enabling Data Governance to promote the strategic use of information, and provide the standardized methods and tools to empower the business to effectively use data. She served as SVP of Enterprise Data Warehousing at BBVA Compass from 2007 – 2013 where she implemented their enterprise data warehouse. From 1995-2007 she worked for R.L. Polk & Co. in Southfield, Michigan a global automotive data provider where she held various levels of responsibility from Chief Architect & Sr. Technologist, Director Data Warehousing and in the Enterprise Data Management Group. Denise is a proponent for data management and business intelligence technologies in the Birmingham technical community and is a board member of Tech Birmingham as well as an Advisor to the UAB Information Engineering Program. In 2013 Denise helped start the Birmingham Women in Technology group where she was Chair; this group’s purpose is to give women in Birmingham a forum for networking and connecting while having a common mission of encouraging young women in pursuing technology fields. She is a member of the Birmingham Chapter of the National Assn of Professional Women, and is a volunteer for the Birmingham Heart Guild and the United Way.
Russell “Rusty” Hyde, PE, started his career in the United States Air Force, where he served for 12 years. Following his service he returned to Alabama and started his first business Southern Applied Technologies in 1990, where he developed and patented an airborne remote sensing system. He later joined his wife Liz when she started Hyde Engineering in 1995, and just recently in 2014 started a new venture, Blastone, LLC, an engineering studies company. Rusty earned his bachelor’s degree in electrical engineering from UAB in 1983 and earned his master’s in electrical engineering from UAB in 2007.

During his 20-plus years of progressive electrical engineering experience, Rusty has managed more than 1000 projects ranging from small renovations to new facility construction. He specializes in the areas of security, fire alarms, data/voice and computer systems for institutional, scientific, and technical facilities. He has also been the recipient of numerous awards, including USAF Instructor Navigator of the Year in 1988, an ACEC State Award of Excellence for the Birmingham School of Law renovation project in 2014, and two ACECA state awards in 2015 for his work on the new Gardendale City Hall and the Mountain Brook Community Church renovation.

Thomas Alan Hill earned his bachelor of science degree in mechanical engineering from UAB in 1988 and his master of engineering degree from UAB in 2009. He began his professional career as a project engineer working for Boeing Aerospace on the Space Station Program. He worked on projects for the logistics carriers used to resupply the station. In 1991 he left Boeing to join Zum Air Systems Division as a Project/Sales Engineer working with Industrial Centrifugal Air Fans. In this role he worked with many organizations including manufacturing that utilized centrifugal fans in their processes. This work taught him a great deal about manufacturing and lead him to join an upstart organization in 1998 named the Alabama Technology Network (ATN), which was part of a the federal Manufacturing Extension Partnership (MEP) program. For the next fourteen years, Alan served many manufacturing clients around the state, working on manufacturing process and system improvement projects that resulted in higher productivity impacts. During this time, Alan worked his way up to become Center Director of the ATN Birmingham Center and received the ATN Outstanding Performance Award in 2001, ATN Practitioner of the Year in 2002 and 2004, ATN Innovator of the Year in 2009 and nominated for the National MEP Innovator of the Year in 2010. In 2012, he was named executive director of the Alabama Productivity Center located at the University of Alabama. He supports the state’s economic development initiatives by serving various industry sectors through out the state. Alan holds a number of industry certifications, including Six Sigma Black Belt, Lean Manufacturing Trainer and various quality management system certifications. Alan has been married to his wife Marites for 24 years and has two awesome children, Lindsey and Alex.
Randy Horton is manager of the Transmission Planning – Stability and Special Studies group within the Southern Company Services Transmission (SCST) organization. In his current role, Dr. Horton is responsible for providing technical leadership to the organization and managing a team of highly-skilled engineers who conduct technical studies and research in the areas of power system stability, power quality, transients, post-event analysis, geomagnetic disturbance (GMD) and high-altitude electromagnetic pulse (HEMP).

Dr. Horton began his career with Southern Company in 1993 as a co-op student for Alabama Power Company. During his career, he has held various engineering positions within the Protection and Control and Technical Studies groups of Alabama Power Company and Southern Company Services, progressing to Principal Engineer in 2006. In 2010, he joined the Electric Power Research Institute (EPRI) where he consulted and conducted research for utilities and governmental agencies in the areas of power quality, transients, system protection and GMD. In 2012, he re-joined Southern Company as Chief Engineer, and moved into his current role in 2015.

Dr. Horton received the B.S. degree in electrical engineering from UAB in 1996, the Master of Electrical Engineering degree from Auburn University (Auburn, AL) in 2002 and the Ph.D. degree in Electrical Engineering from the University of Alabama (Tuscaloosa, AL) in 2009, all with specialization in electric power systems. He is a registered Professional Engineer in the state of Alabama.

Tonga Hosch earned a bachelor’s and a master’s degree in civil engineering from UAB in 2006 and 2009, respectively. In 2010, she started her engineering profession with Structural Technics—a local engineering firm in Trussville, AL. In 2011, she joined Southern Company and has been with the company ever since. She had worked for Southern Nuclear for 4.5 years, specializing in analysis and design of nuclear plant structures for seismic events. Her experience in supporting the company’s nuclear plants has now expanded to designing transmission line for all of Southern Company’s generating fleet (e.g., natural gas, oil, coal, nuclear, and hydro plants). She also provides technical support for the operating companies’ transmission line maintenance organizations.

As a young professional engineer, Mrs. Hosch believes in continuous learning and develops herself to gain more knowledge in her engineering field. She constantly reaches out to other successful engineers in the industry to learn from their experiences and seek advice that will propel her further. Mrs. Hosch is also a leader in work-related organizations that goes beyond her job responsibilities. She served on the Professional Development Committee of Southern Nuclear’s chapter of North American Young Generation in Nuclear (NAYGN). She currently serves as the Development and Networking Co-Lead for the Technical Women in SCS Transmission (TWIST) organization.